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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,305

06/23/2006

Satoshi Suda

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02/03/2011

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EXAMINER

VASISTH, VISHAL V

ART UNIT

PAPER NUMBER

1771

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,305	Applicant(s) SUDA ET AL.	
	Examiner VISHAL VASISTH	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Drafts, Person's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on 12/14/2010 has been entered.

Response to Amendment

2. Applicants' response filed 12/14/2010 cancelled claims 1-19 and added new claims 20-27. Applicants' amendments overcome the claim objections, the 35 USC 102 rejection over Konishi, and the 35 USC 103 rejection over Garmier in view of Konishi, from the office action mailed on 9/17/2010 and, therefore, these objections/rejections are withdrawn. Neither applicants' amendments nor arguments overcome the 35 USC 103 rejection over Konishi in view of Yokota from the office action mailed on 9/17/2010, which can be applied to new claims 20-27, and is discussed below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 1771

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 20-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi et al., US Patent No. 6,300,292 (hereinafter referred to as Konishi) in view of Yokota et al., US Patent Application Publication No. 2002/0035043 (hereinafter referred to as Yokota).

Konishi discloses a composition with a degree of unsaturation of 0.3 or less (as recited in claim 20) (Col. 11/L. 13-23) comprising a modified vegetable oil such as a genetically modified high oleic sunflower oil (triesters of fatty acids and glycerin as recited in claim 20) having an oleic acid profile of 80 wt% (within the range as recited in claim 20), a linoleic acid profile of 8 wt% (within the range as recited in claim 20), a palmitic acid content of 7 wt% (within the range as recited in claims 22-23) (Col. 13-14/Tables 1-3) and a kinematic viscosity of 40 measured at 40°C (as recited in claim 20) (Col. 13/Table 1).

The composition of Konishi further comprises additives such as pour point depressants, antioxidants and 0.1 to 1.0 mass% of rust preventives such as phosphates (phosphoric acid ester as recited in claim 20) (Col. 11/L. 24-34) and additional synthetic

Art Unit: 1771

ester base oils including 50 mass% or less of diester base oils (as recited in claim 24) (Col. 3/L. 7-12), and/or mineral oils (hydrocarbon oil as recited in claim 21) (Claim 6 of Konishi). Based on the disclosure of 50 mass% or less of the diester oils, it is inherent that the modified vegetable oils can be present up to 50 mass% as well which is within the range recited in claims 20.

Konishi discloses that the lubricant composition is useful in applications including hydraulic fluids amongst others. Konishi further discloses all of the limitations of the instant claims and therefore inherently could be used as a cutting/grinding/roll forming oil (as recited in claim 25) or a metal working oil (as recited in claim 26) and/or an oil for metal working with a minimal quantity lubricant system (as recited in claim 27).

Konishi discloses all of the limitations discussed above including sulfur-containing additives and ester derived base oils used in addition to the modified vegetable oils discussed above. Konishi does not, however, explicitly disclose 0.1 to 20 mass% of a sulfidized ester as recited in claim 20.

Yokota discloses a cutting or grinding oil composition which are suitable for use in a minimal quantity lubrication system which can be used to lubricate a metal piece to be cut or grind (Para. [0001]) comprising high-oleic rape or high-oleic sunflower oil as a base oil along with auxiliary additives including most preferably at least 0.5 to most preferably less than 15 mass% of an oleic acid sulfide (Para. [0047]-[0048] and [0078]). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the sulfurized ester of Yokota in the composition of Konishi in order to enhance the lubricating properties of the oil (Para. [0045]).

Response to Arguments

6. Applicants' arguments filed on 12/14/2010 with respect to claims 20-27 have been considered and are moot in regards to the 35 USC 102 rejection over Konishi and the 35 USC 103 rejection over Garmier in view of Konishi as these rejections have been withdrawn. Applicants' arguments regarding the 35 USC 103 rejection over Konishi in view of Yokota are not persuasive.

Applicants argue that there is no motivation to combine Konishi with Yokota and to do so would be impermissible hindsight. This argument is not persuasive. In response to applicants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicants' disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Konishi discloses sulfur additives and ester-based base oil additives that can be used in combination with the modified vegetable oil base oils. Yokota discloses a similar composition comprising vegetable oils with additives that are well known in the art and Yokota provides motivation for using such additives in machining compositions. Yokota discloses that oiliness improvers such as sulfurized esters are known to enhance the lubricating properties of the oil in paragraph 0045.

Applicants also argue that the present invention provides unexpected results and point to data in the specification and a Declaration signed by Satoshi Suda on 2/9/2010 to support their position. Applicants' argument is not persuasive.

The claims are still not commensurate in scope with the data provided. For example, the example oils of the instant application use very specific base oils that are limited by concentration, viscosity index, acid value and iodine value. Instant claim 20 does not recite any of these limiting properties except for concentration which is much too broad in the instant claims. Also, the additives used in the example formulations of the instant specification are much narrower than the broad recitation of nearly every phosphorus or sulfur-containing additive known for use in lubricants and in many of the example formulations a combination of additives are used. Also, the concentrations in the example formulations of the instant specification for the sulfurized ester additive are much narrower than what is recited in the instant claims. Applicants argue that there does not need to be a showing of unexpected results over the entire range of properties and this is accurate, but there needs to be a showing of unexpected results across an entire concentration range. A criticality for a concentration range must be shown or a trend must be established which would prove criticality of the range inherently. Applicants have not been able to show a criticality or trend. Applicants use the sulfurized ester in large concentrations, 10% or higher, in comparative examples.

Furthermore, based on the amendments to the instant claims many of the example formulations are now no longer within the claim limitations and still demonstrate excellent results - such as all of the example oils from Example 19-30 from

Art Unit: 1771

the instant specification. It is therefore evident that the example formulations do not demonstrate unexpected results at all. It is not unexpected for genetically modified base oils to have excellent properties when compared to a standard synthetic base oil wherein the same concentration of additives is present in each formulation as is shown in Table 7. Also, the example formulations comprise additional additives including antioxidants and/or sulfonates that are not recited in the instant claims.

The Declaration does show how a triester with no greater than 0.3 degrees of unsaturation and 5 wt% of the specific phosphorus or sulfur-containing additive can show good abrasion resistance, but the claims are not commensurate in scope with the data provided in the Specification or the Declaration.

Applicants have compared their results to the closest prior art which in this case would be Konishi.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VISHAL VASISTH whose telephone number is (571)270-3716. The examiner can normally be reached on M-R 8:30a-5:30p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571)272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1771

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VVV

/Ellen M McAvoy/
Primary Examiner, Art Unit 1771